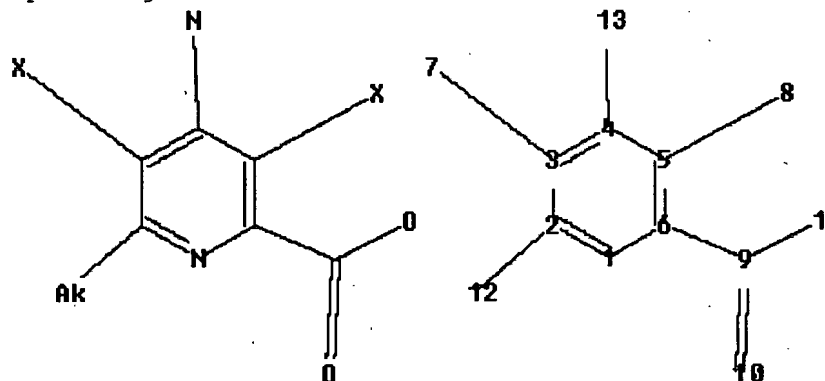


Uploading 11.str



chain nodes :

7 8 9 10 11 12 13

ring nodes :

1 2 3 4 5 6

chain bonds :

2-12 3-7 4-13 5-8 6-9 9-10 9-11

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6

exact/norm bonds :

2-12 4-13 9-10 9-11

exact bonds :

3-7 5-8 6-9

normalized bonds :

1-2 1-6 2-3 3-4 4-5 5-6

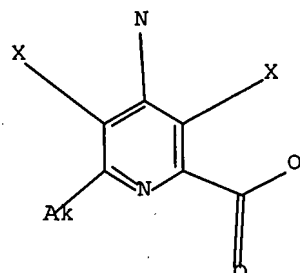
Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:CLASS 9:CLASS 10:CLASS  
 11:CLASS 12:CLASS 13:CLASS

=&gt; d que 127

L1

STR



Structure attributes must be viewed using STN Express query preparation.  
 L5 12 SEA FILE=REGISTRY SSS FUL L1

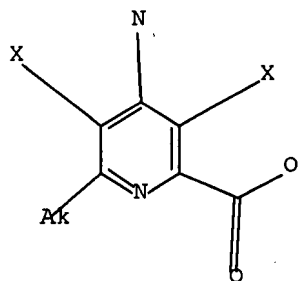
L8 6 SEA FILE=HCAPLUS ABB=ON PLU=ON L5  
 L13 21 SEA FILE=HCAPLUS ABB=ON PLU=ON ("BALKO T"/AU OR "BALKO T W"/AU OR "BALKO TERRY W"/AU OR "BALKO TERRY WILLIAM"/AU)  
 L14 8 SEA FILE=HCAPLUS ABB=ON PLU=ON ("BUYSSE A"/AU OR "BUYSSE A M"/AU OR "BUYSSE A M M"/AU OR "BUYSSE ANN M"/AU OR "BUYSSE ANN MARIE"/AU OR "BUYSSE ANNE MARIE"/AU)  
 L15 34 SEA FILE=HCAPLUS ABB=ON PLU=ON ("FIELDS S"/AU OR "FIELDS S C"/AU OR "FIELDS STEPHEN C"/AU OR "FIELDS STEPHEN CRAIG"/AU OR "FIELDS STEVE"/AU OR "FIELDS STEVEN"/AU OR "FIELDS STEVEN C"/AU OR "FIELDS STEVEN D"/AU)  
 L16 23 SEA FILE=HCAPLUS ABB=ON PLU=ON ("IRVINE N"/AU OR "IRVINE N A"/AU OR "IRVINE N M"/AU OR "IRVINE NICHOLAS M"/AU OR "IRVINE NICHOLAS MARTIN"/AU)  
 L17 77 SEA FILE=HCAPLUS ABB=ON PLU=ON ("LO W"/AU OR "LO W C"/AU)  
 L18 16 SEA FILE=HCAPLUS ABB=ON PLU=ON ("LO WILL"/AU OR "LO WILLIAM"/AU OR "LO WILLIAM C"/AU OR "LO WILLIAM CHI LEUNG"/AU)  
 L19 93 SEA FILE=HCAPLUS ABB=ON PLU=ON (L17 OR L18)  
 L20 31 SEA FILE=HCAPLUS ABB=ON PLU=ON "LOWE C"/AU  
 L21 27 SEA FILE=HCAPLUS ABB=ON PLU=ON ("LOWE CHRIS"/AU OR "LOWE CHRISTIAN"/AU OR "LOWE CHRISTIAN THOMAS"/AU)  
 L22 58 SEA FILE=HCAPLUS ABB=ON PLU=ON (L20 OR L21)  
 L23 31 SEA FILE=HCAPLUS ABB=ON PLU=ON ("RICHBURG J"/AU OR "RICHBURG J S"/AU OR "RICHBURG JOHN"/AU OR "RICHBURG JOHN S"/AU OR "RICHBURG JOHN S III"/AU OR "RICHBURG JOHN SANDERS"/AU OR "RICHBURG JOHN SANDERS III"/AU)  
 L24 13 SEA FILE=HCAPLUS ABB=ON PLU=ON ("SCHMITZER P"/AU OR "SCHMITZE R P R"/AU OR "SCHMITZER PAUL R"/AU OR "SCHMITZER PAUL RICHARD"/AU)  
 L25 1 SEA FILE=HCAPLUS ABB=ON PLU=ON L13 AND L14 AND L15 AND L16 AND L19 AND L22 AND L23 AND L24  
 L26 3 SEA FILE=HCAPLUS ABB=ON PLU=ON (L13 OR L14 OR L15 OR L16 OR L17 OR L18 OR L19 OR L20 OR L21 OR L22 OR L23 OR L24) AND L8  
 L27 3 SEA FILE=HCAPLUS ABB=ON PLU=ON (L25 OR L26)

=> d que 138

L28 80 SEA BALKO T?/AU  
 L29 89 SEA BUYSSE A?/AU  
 L30 1476 SEA FIELDS S?/AU  
 L31 152 SEA IRVINE N?/AU  
 L32 2977 SEA LO W?/AU  
 L33 2247 SEA LOWE C?/AU  
 L34 158 SEA RICHBURG J?/AU  
 L35 25 SEA SCHMITZER P?/AU  
 L36 2 SEA L28 AND L29 AND L30 AND L31 AND L32 AND L33 AND L34 AND L35  
 L37 7 SEA (L28 OR L29 OR L30 OR L31 OR L32 OR L33 OR L34 OR L35) AND AMINOPICOLINATE?  
 L38 7 SEA (L36 OR L37)

=> d que 18

L1 STR



Structure attributes must be viewed using STN Express query preparation.

L5 12 SEA FILE=REGISTRY SSS FUL L1

L8 6 SEA FILE=HCAPLUS ABB=ON PLU=ON L5

=> dup rem 127,138,18

FILE 'HCAPLUS' ENTERED AT 15:18:28 ON 23 MAR 2007

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'WPIX' ENTERED AT 15:18:28 ON 23 MAR 2007

COPYRIGHT (C) 2007 THE THOMSON CORPORATION

PROCESSING COMPLETED FOR L27

PROCESSING COMPLETED FOR L38

PROCESSING COMPLETED FOR L8

L39 7 DUP REM L27 L38 L8 (9 DUPLICATES REMOVED)

ANSWERS '1-7' FROM FILE HCAPLUS

=> d ibib abs hitstr retable 139 tot

L39 ANSWER 1 OF 7 HCAPLUS COPYRIGHT 2007 ACS on STN DUPLICATE 1

ACCESSION NUMBER: 2005:122777 HCAPLUS Full-text

DOCUMENT NUMBER: 142:192757

TITLE: Preparation of 6-(1,1-difluoroalkyl)-4-**aminopicolinate** derivative herbicides

INVENTOR(S): **Balko, Terry William; Fields, Stephen Craig; Irvine, Nicholas Martin; Lowe, Christian Thomas; Schmitzer, Paul Richard**

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 10 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

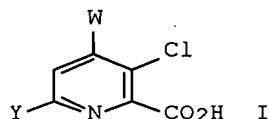
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005032651	A1	20050210	US 2004-911683	20040804
AU 2004265309	A1	20050224	AU 2004-265309	20040804
CA 2532100	A1	20050224	CA 2004-2532100	20040804
WO 2005016887	A1	20050224	WO 2004-US25116	20040804

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,

10816611

CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,  
 GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,  
 LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,  
 NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,  
 TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
 RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,  
 AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,  
 EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,  
 SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,  
 SN, TD, TG

EP 1651607 A1 20060503 EP 2004-780023 20040804  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK  
 CN 1823045 A 20060823 CN 2004-80020021 20040804  
 BR 2004013340 A 20061010 BR 2004-13340 20040804  
 JP 2007501247 T 20070125 JP 2006-522683 20040804  
 NO 2006000079 A 20060213 NO 2006-79 20060105  
 PRIORITY APPLN. INFO.: US 2003-493555P P 20030804  
 WO 2004-US25116 W 20040804  
 OTHER SOURCE(S): CASREACT 142:192757; MARPAT 142:192757  
 GI



AB 6-(1,1-Difluoroalkyl)-4-**aminopicolinate** derivs. I (Y = 1,1-difluoroalkyl; W = NO<sub>2</sub>, N<sub>3</sub>, N:CR<sub>1</sub>R<sub>2</sub> or NHN:CR<sub>3</sub>R<sub>4</sub>; R<sub>1</sub>, R<sub>2</sub> = H, alkyl, alkenyl, alkynyl, aryl, heteroaryl, alkoxy, amino, acyl, etc.; R<sub>3</sub>, R<sub>4</sub> = H, alkyl, alkenyl, alkynyl, aryl or heteroaryl; :CR<sub>3</sub>R<sub>4</sub> = 5- or 6-membered saturated ring) are prepared as broad-spectrum herbicides.

L39 ANSWER 2 OF 7 HCAPLUS COPYRIGHT 2007 ACS on STN DUPLICATE 2

ACCESSION NUMBER: 2004:825101 HCAPLUS Full-text

DOCUMENT NUMBER: 141:308993

TITLE: 6-Alkyl or alkenyl-4-aminopicolinates and their use as herbicides

INVENTOR(S): **Balko, Terry William; Buysse, Ann Marie; Fields, Stephen Craig; Irvine, Nicholas Martin; Lo, William Chi-Leung; Lowe, Christian Thomas; Richburg, John Sanders; Schmitzer, Paul Richard**

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 12 pp.  
 CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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10816611

US 2004198608	A1	20041007	US 2004-816611	20040402
AU 2004228666	A1	20041021	AU 2004-228666	20040402
CA 2517486	A1	20041021	CA 2004-2517486	20040402
WO 2004089906	A2	20041021	WO 2004-US10358	20040402
WO 2004089906	A3	20041202		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

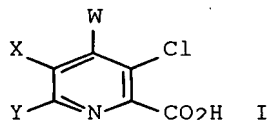
EP 1608624	A2	20051228	EP 2004-749733	20040402
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
BR 2004008935	A	20060404	BR 2004-8935	20040402
CN 1764646	A	20060426	CN 2004-80007800	20040402
JP 2006523236	T	20061012	JP 2006-509682	20040402
NO 2005004378	A	20051018	NO 2005-4378	20050921

PRIORITY APPLN. INFO.:

US 2003-459892P	P	20030402
WO 2004-US10358	A	20040402

OTHER SOURCE(S): MARPAT 141:308993

GI



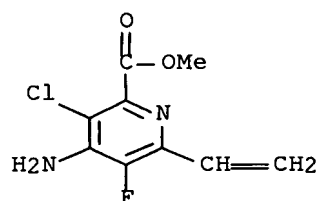
AB 4-Aminopicolinates with alkyl or alkenyl substituents in the 6-position (I, wherein X = H, F; Y = Cl-4 alkyl, Cl-4-alkoxy- or thioalkoxy- substituted alkyl, or C2-3 alkenyl; and W represents NO<sub>2</sub>, N<sub>3</sub>, NR<sub>1</sub>R<sub>2</sub>, etc.; R<sub>1</sub> and R<sub>2</sub> independently = H, Cl-6 alkyl, etc.) and their amine and acid derivs. are potent herbicides demonstrating a broad spectrum of weed control. Thus, Me 4-amino-3-chloro-6-ethylpyridine-2-carboxylate (II) at 250 ppm controlled cocklebur (*Xanthium strumarium*), lamb's-quarters (*Chenopodium album*), and pigweed (*Amaranthus retroflexus*) by 95, 100, and 98%, resp. (postemergent control), with no injury to corn (*Zea mays*). Preemergent control of lamb's-quarters by II at 280 ppm was 98%.

IT 767334-31-6 767334-33-8 767334-35-0  
767334-37-2 767334-42-9

RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)  
(as herbicide with broad spectrum of weed control)

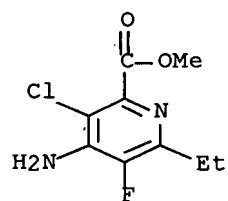
RN 767334-31-6 HCAPLUS

CN 2-Pyridinecarboxylic acid, 4-amino-3-chloro-6-ethenyl-5-fluoro-, methyl ester (9CI) (CA INDEX NAME)



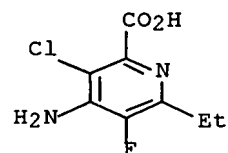
RN 767334-33-8 HCAPLUS

CN 2-Pyridinecarboxylic acid, 4-amino-3-chloro-6-ethyl-5-fluoro-, methyl ester (9CI) (CA INDEX NAME)



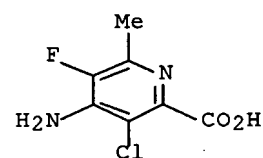
RN 767334-35-0 HCAPLUS

CN 2-Pyridinecarboxylic acid, 4-amino-3-chloro-6-ethyl-5-fluoro- (9CI) (CA INDEX NAME)



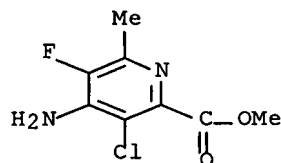
RN 767334-37-2 HCAPLUS

CN 2-Pyridinecarboxylic acid, 4-amino-3-chloro-5-fluoro-6-methyl- (9CI) (CA INDEX NAME)



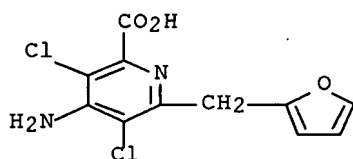
RN 767334-42-9 HCAPLUS

CN 2-Pyridinecarboxylic acid, 4-amino-3-chloro-5-fluoro-6-methyl-, methyl ester (9CI) (CA INDEX NAME)



L39 ANSWER 3 OF 7 HCAPLUS COPYRIGHT 2007 ACS on STN DUPLICATE 3  
 ACCESSION NUMBER: 2003:117817 HCAPLUS Full-text  
 DOCUMENT NUMBER: 138:153444  
 TITLE: Preparation of 6-aryl-4-aminopicolinic acids as herbicides with excellent crop selectivity  
 INVENTOR(S): **Balko, Terry William; Buysse, Ann Marie; Epp, Jeffrey Brian; Fields, Stephen Craig; Lowe, Christian Thomas; Keese, Renee Joan; Richburg, John Sanders, III; Ruiz, James Melvin; Weimer, Monte Ray; Green, Renard Antonio; Gast, Roger Eugene; Bryan, Kristy; Irvine, Nicholas Martin; Lo, William Chi-Leung; Brewster, William Kirkland; Webster, Jeffrey Dale**  
 PATENT ASSIGNEE(S): Dow AgroSciences, LLC, USA  
 SOURCE: PCT Int. Appl., 84 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003011853	A1	20030213	WO 2002-US24120	20020730
WO 2003011853	A8	20040715		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2453623	A1	20030213	CA 2002-2453623	20020730
US 2003114311	A1	20030619	US 2002-209448	20020730
US 6784137	B2	20040831		
EP 1414814	A1	20040506	EP 2002-756794	20020730
EP 1414814	B1	20050202		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
BR 2002011532	A	20040914	BR 2002-11532	20020730
CN 1551876	A	20041201	CN 2002-814816	20020730
JP 2005505523	T	20050224	JP 2003-517045	20020730



## RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Dow Agrosciences Llc	2001			WO 0151468 A	HCAPLUS

L39 ANSWER 4 OF 7 HCAPLUS COPYRIGHT 2007 ACS on STN DUPLICATE 4

ACCESSION NUMBER: 2001:526059 HCAPLUS Full-text

DOCUMENT NUMBER: 135:107254

TITLE: Preparation of 4-aminopicolinates as herbicides

INVENTOR(S): **Fields, Stephen Craig**; Alexander, Anita  
 Lenora; **Balko, Terry William**; Bjelk, Leslie  
 Anne; **Buyse, Ann Marie**; Keese, Renee Joan;  
 Krumel, Karl Leopold; **Lo, William Chi-Leung**;  
**Lowe, Christian Thomas**; **Richburg, John**  
**Sanders**; Ruiz, James Melvin

PATENT ASSIGNEE(S): Dow Agrosciences LLC, USA

SOURCE: PCT Int. Appl., 86 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

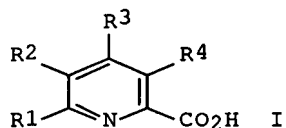
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001051468	A1	20010719	WO 2001-US1177	20010112
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RW:			GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG	
CA 2396874	A1	20010719	CA 2001-2396874	20010112
US 6297197	B2	20011002	US 2001-760111	20010112
US 2001047099	A1	20011129		
BR 2001007649	A	20021008	BR 2001-7649	20010112
EP 1246802	A1	20021009	EP 2001-942359	20010112
R:			AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR	
HU 200204118	A2	20030328	HU 2002-4118	20010112
AU 760286	B2	20030508	AU 2001-29453	20010112
JP 2003519685	T	20030624	JP 2001-551850	20010112
NZ 520244	A	20030725	NZ 2001-520244	20010112
RU 2220959	C1	20040110	RU 2002-121652	20010112
EP 1498413	A1	20050119	EP 2004-18297	20010112
R:			AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR	



10816611

TW 235747	B	20050711	TW 2001-90100826	20010223
ZA 2002005557	A	20030711	ZA 2002-5557	20020711
NO 2002003370	A	20020819	NO 2002-3370	20020712
PRIORITY APPLN. INFO.:			US 2000-176720P	P 20000114
			EP 2001-942359	A3 20010112
			WO 2001-US1177	W 20010112

OTHER SOURCE(S):                    MARPAT 135:107254  
GI

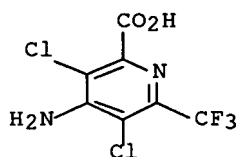


AB Title compds. [I; R1 = halo, alkoxy, aryloxy, CF<sub>3</sub>, etc.; R2 = H, halo, alkoxy, aryloxy, NO<sub>2</sub>, etc.; R3 = NO<sub>2</sub>, N<sub>3</sub>, (un)substituted amino, -N:CH<sub>2</sub>, -NHN:CH<sub>2</sub>; R4 = halo, alkoxy, alkylthio, aryloxy, NO<sub>2</sub>] were prepared Thus, Me 6-bromo-3-chloropyridine-2-carboxylate was nitrated and the reduced product saponified to give I (R1 = Br, R2 = H, R3 = NH<sub>2</sub>, R4 = Cl). Data for biol. activity of I were given.

IT **350602-28-7P**  
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of 4-aminopicolinates as herbicides)

RN 350602-28-7 HCAPLUS

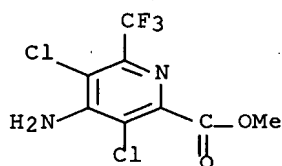
CN 2-Pyridinecarboxylic acid, 4-amino-3,5-dichloro-6-(trifluoromethyl)- (9CI)  
(CA INDEX NAME)



IT **350601-80-8P**  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (preparation of 4-aminopicolinates as herbicides)

RN 350601-80-8 HCAPLUS

CN 2-Pyridinecarboxylic acid, 4-amino-3,5-dichloro-6-(trifluoromethyl)-, methyl ester (9CI) (CA INDEX NAME)



## RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Domenico, P	1971			US 3607877 A	HCAPLUS
Dow Chem Co	1967			US 3325272 A	HCAPLUS
Dow Chemical Co	1966			US 3285925 A	HCAPLUS
Dow Chemical Co	1973			BE 788756 A	
Gulbenk, A	1973			US 3755338 A	HCAPLUS
Ici Ltd	1974			GB 1363415 A	
Prod Chim Ind Et Agrico	1967			GB 1082763 A	
Ramanand, K	1993	59	2251	APPL ENVIRON MICROBI	HCAPLUS

L39 ANSWER 5 OF 7 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1974:14855 HCAPLUS Full-text

DOCUMENT NUMBER: 80:14855

TITLE: Polychloro derivatives of dicarboxy pyridines

INVENTOR(S): Bimber, Russel M.; Schuldt, Paul H.

PATENT ASSIGNEE(S): Diamond Shamrock Corp.

SOURCE: U.S., 8 pp. Division of U.S. 3,637,716 (CA 76;126800y).

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3766195	A	19731016	US 1971-170282	19710809
US 3637716	A	19720125	US 1969-840484	19690709
PRIORITY APPLN. INFO.:			US 1969-840484	A3 19690709

GI For diagram(s), see printed CA Issue.

AB Pesticidal chloropyridinecarboxylic acids [I, Rn = 2-, 3-, 4-CO<sub>2</sub>H, 2,4-, 2,6-, 3,5-(CO<sub>2</sub>H)<sub>2</sub>, R<sub>1</sub> = Cl], their NH<sub>4</sub><sup>+</sup> and K salts and some 2- and 4-NH<sub>2</sub> derivs. were prepared. The acids were prepared by oxidation of the corresponding chlorocyanopyridines with 80% H<sub>2</sub>SO<sub>4</sub>, which in turn were treated with suitable reagents to give the other derivs.

IT **35592-27-9P 35592-35-9P 35592-37-1P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

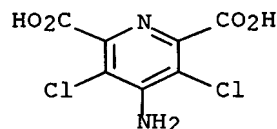
RN 35592-27-9 HCAPLUS

CN 2,6-Pyridinedicarboxylic acid, 4-amino-3,5-dichloro- (9CI) (CA INDEX NAME)



RN 35592-35-9 HCAPLUS

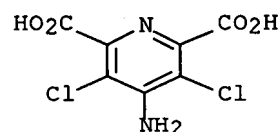
CN 2,6-Pyridinedicarboxylic acid, 4-amino-3,5-dichloro-, monopotassium salt  
(9CI) (CA INDEX NAME)



● K

RN 35592-37-1 HCAPLUS

CN 2,6-Pyridinedicarboxylic acid, 4-amino-3,5-dichloro-, dipotassium salt  
(9CI) (CA INDEX NAME)



●2 K

L39 ANSWER 6 OF 7 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1974:56246 HCAPLUS Full-text

DOCUMENT NUMBER: 80:56246

TITLE: Poultry manure phytotoxicity

AUTHOR(S): Minchinton, I. R.; Jones, D. L.; Sang, J. P. L.

CORPORATE SOURCE: Div. Agric. Chem., Melbourne, Australia

SOURCE: Journal of the Science of Food and Agriculture (1973),  
24(11), 1437-48

CODEN: JSFAAE; ISSN: 0022-5142

DOCUMENT TYPE: Journal

LANGUAGE: English

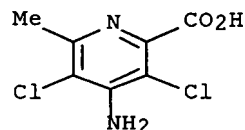
AB Phytotoxicity of poultry deep litter manure was due to 4-amino-3,5-dichloro-6-methylpicolinic acid (I) [50978-41-1]. I is probably a metabolite of 4-amino-3,5-dichloro-2,6-lutidine (II) [50978-40-0], an impurity in the clopidol [2971-90-6] used in feeds to control coccidiosis.

IT 50978-41-1

RL: BIOL (Biological study)

(of poultry manure, phytotoxicity in relation to)

RN 50978-41-1 HCAPLUS  
 CN 2-Pyridinecarboxylic acid, 4-amino-3,5-dichloro-6-methyl- (9CI) (CA INDEX NAME)



L39 ANSWER 7 OF 7 HCAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1972:126800 HCAPLUS Full-text  
 DOCUMENT NUMBER: 76:126800  
 TITLE: Polychloro derivatives of mono- and dicarboxypyridines as pesticides and as chemical intermediates  
 INVENTOR(S): Bimber, Russell M.; Schuldt, Paul H.  
 SOURCE: U.S., 8 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3637716	A	19720125	US 1969-840484	19690709
US 3766195	A	19731016	US 1971-170282	19710809
PRIORITY APPLN. INFO.:			US 1969-840484	A3 19690709

GI For diagram(s), see printed CA Issue.

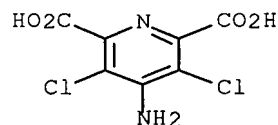
AB Pesticides (I, R1 = Cl, CO2H, R2 = Cl, NH2; II, R1 = Cl, CO2H, NH2, R2 = Cl, CO2H; III) were prepared by hydrolysis of nitriles with H2SO4. Thus, tetrachloro-2-cyanopyridine treated with H2SO4 gave tetrachloropicolinic acid (II, R1 = R2 = Cl). Similarly prepared were 24 addnl. I, II, and III, including some of their acid chlorides, Me esters, and K and NH4+ salts. Trichloro-dinicotinoyl dichloride (I (R1 = CO2H, R2 = Cl) diacid chloride) at 500 ppm killed 75% Tetranychus species and 40% Musca domestica (housefly). Pesticidal and herbicidal tests for other I, II, III, etc. are given.

IT **35592-27-9P 35592-35-9P 35592-37-1P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)

RN 35592-27-9 HCAPLUS

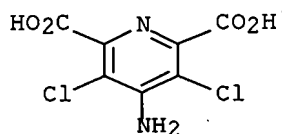
CN 2,6-Pyridinedicarboxylic acid, 4-amino-3,5-dichloro- (9CI) (CA INDEX NAME)



RN 35592-35-9 HCAPLUS

10816611

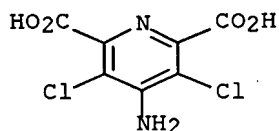
CN 2,6-Pyridinedicarboxylic acid, 4-amino-3,5-dichloro-, monopotassium salt  
(9CI) (CA INDEX NAME)



● K

RN 35592-37-1 HCAPLUS

CN 2,6-Pyridinedicarboxylic acid, 4-amino-3,5-dichloro-, dipotassium salt  
(9CI) (CA INDEX NAME)



●2 K

=> d his full

(FILE 'HOME' ENTERED AT 15:03:31 ON 23 MAR 2007)

FILE 'REGISTRY' ENTERED AT 15:03:35 ON 23 MAR 2007

L1 STRUCTURE UPLOADED

L2 0 SEA SSS SAM L1

FILE 'HCAPLUS' ENTERED AT 15:05:25 ON 23 MAR 2007

E US2004-816611/APPS

L3 1 SEA ABB=ON PLU=ON US2004-816611/AP

D SCAN

SEL RN L3

FILE 'REGISTRY' ENTERED AT 15:05:42 ON 23 MAR 2007

L4 16 SEA ABB=ON PLU=ON (76165-18-9/BI OR 767334-31-6/BI OR  
767334-32-7/BI OR 767334-33-8/BI OR 767334-34-9/BI OR 767334-35  
-0/BI OR 767334-36-1/BI OR 767334-37-2/BI OR 767334-38-3/BI OR  
767334-39-4/BI OR 767334-40-7/BI OR 767334-41-8/BI OR 767334-42  
-9/BI OR 767334-43-0/BI OR 767334-44-1/BI OR 767334-45-2/BI)

D QUE L1

D SCAN

L5 12 SEA SSS FUL L1

SAVE L5 QAZI611/A TEMP

L6 5 SEA ABB=ON PLU=ON L5 AND L4

L7 11 SEA ABB=ON PLU=ON L4 NOT L6

## D SCAN

FILE 'HCAPLUS' ENTERED AT 15:08:09 ON 23 MAR 2007

L8 6 SEA ABB=ON PLU=ON L5  
L9 5 SEA ABB=ON PLU=ON L8 AND (AY<2003 OR PY<2003 OR PRY<2003)

FILE 'MEDLINE, EMBASE, BIOSIS, CAOLD, DRUGU' ENTERED AT 15:09:06 ON 23 MAR 2007

L10 0 SEA ABB=ON PLU=ON L5

FILE 'BEILSTEIN' ENTERED AT 15:09:26 ON 23 MAR 2007

L11 1 SEA SSS FUL L1  
L12 0 SEA ABB=ON PLU=ON L11 NOT L5

FILE 'HCAPLUS' ENTERED AT 15:09:50 ON 23 MAR 2007

E BALKO T/AU  
L13 21 SEA ABB=ON PLU=ON ("BALKO T"/AU OR "BALKO T W"/AU OR "BALKO TERRY W"/AU OR "BALKO TERRY WILLIAM"/AU)  
E BUYSSE A/AU  
L14 8 SEA ABB=ON PLU=ON ("BUYSSE A"/AU OR "BUYSSE A M"/AU OR "BUYSSE A M M"/AU OR "BUYSSE ANN M"/AU OR "BUYSSE ANN MARIE"/AU OR "BUYSSE ANNE MARIE"/AU)  
E FIELDS S/AU  
L15 34 SEA ABB=ON PLU=ON ("FIELDS S"/AU OR "FIELDS S C"/AU OR "FIELDS STEPHEN C"/AU OR "FIELDS STEPHEN CRAIG"/AU OR "FIELDS STEVE"/AU OR "FIELDS STEVEN"/AU OR "FIELDS STEVEN C"/AU OR "FIELDS STEVEN D"/AU)  
E IRVINE N/AU  
L16 23 SEA ABB=ON PLU=ON ("IRVINE N"/AU OR "IRVINE N A"/AU OR "IRVINE N M"/AU OR "IRVINE NICHOLAS M"/AU OR "IRVINE NICHOLAS MARTIN"/AU)  
E LO W/AU  
L17 77 SEA ABB=ON PLU=ON ("LO W"/AU OR "LO W C"/AU)  
E LO WILL/AU  
L18 16 SEA ABB=ON PLU=ON ("LO WILL"/AU OR "LO WILLIAM"/AU OR "LO WILLIAM C"/AU OR "LO WILLIAM CHI LEUNG"/AU)  
L19 93 SEA ABB=ON PLU=ON (L17 OR L18)  
E LOWE C/AU  
L20 31 SEA ABB=ON PLU=ON "LOWE C"/AU  
E LOWE CHRIS/AU  
L21 27 SEA ABB=ON PLU=ON ("LOWE CHRIS"/AU OR "LOWE CHRISTIAN"/AU OR "LOWE CHRISTIAN THOMAS"/AU)  
L22 58 SEA ABB=ON PLU=ON (L20 OR L21)  
E RIGHBURG J/AU  
E RICHBURG J/AU  
L23 31 SEA ABB=ON PLU=ON ("RICHBURG J"/AU OR "RICHBURG J S"/AU OR "RICHBURG JOHN"/AU OR "RICHBURG JOHN S"/AU OR "RICHBURG JOHN S III"/AU OR "RICHBURG JOHN SANDERS"/AU OR "RICHBURG JOHN SANDERS III"/AU)  
E SCHMITZER P/AU  
L24 13 SEA ABB=ON PLU=ON ("SCHMITZER P"/AU OR "SCHMITZER P R"/AU OR "SCHMITZER PAUL R"/AU OR "SCHMITZER PAUL RICHARD"/AU)  
L25 1 SEA ABB=ON PLU=ON L13 AND L14 AND L15 AND L16 AND L19 AND L22 AND L23 AND L24  
L26 3 SEA ABB=ON PLU=ON (L13 OR L14 OR L15 OR L16 OR L17 OR L18 OR L19 OR L20 OR L21 OR L22 OR L23 OR L24) AND L8  
L27 3 SEA ABB=ON PLU=ON (L25 OR L26)

FILE 'HCAPLUS, MEDLINE, EMBASE, BIOSIS, DRUGU, WPIX' ENTERED AT 15:15:45 ON 23 MAR 2007

L28           80 SEA ABB=ON   PLU=ON   BALKO T?/AU  
 L29           89 SEA ABB=ON   PLU=ON   BUYSSE A?/AU  
 L30           1476 SEA ABB=ON   PLU=ON   FIELDS S?/AU  
 L31           152 SEA ABB=ON   PLU=ON   IRVINE N?/AU  
 L32           2977 SEA ABB=ON   PLU=ON   LO W?/AU  
 L33           2247 SEA ABB=ON   PLU=ON   LOWE C?/AU  
 L34           158 SEA ABB=ON   PLU=ON   RICHBURG J?/AU  
 L35           25 SEA ABB=ON   PLU=ON   SCHMITZER P?/AU  
 L36           2 SEA ABB=ON   PLU=ON   L28 AND L29 AND L30 AND L31 AND L32 AND  
               L33 AND L34 AND L35  
 L37           7 SEA ABB=ON   PLU=ON   (L28 OR L29 OR L30 OR L31 OR L32 OR L33 OR  
               L34 OR L35) AND AMINOPICOLINATE?  
 L38           7 SEA ABB=ON   PLU=ON   (L36 OR L37)

FILE 'STNGUIDE' ENTERED AT 15:18:14 ON 23 MAR 2007

D QUE L27

D QUE L38

D QUE L8

FILE 'HCAPLUS, WPIX' ENTERED AT 15:18:28 ON 23 MAR 2007

L39           7 DUP REM L27 L38 L8 (9 DUPLICATES REMOVED)

ANSWERS '1-7' FROM FILE HCAPLUS

D IBIB ABS HITSTR RETABLE L39 TOT

FILE HOME

FILE REGISTRY

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 22 MAR 2007 HIGHEST RN 927959-98-6

DICTIONARY FILE UPDATES: 22 MAR 2007 HIGHEST RN 927959-98-6

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH December 2, 2006

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REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

FILE HCAPLUS

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10816611

FILE COVERS 1907 - 23 Mar 2007 VOL 146 ISS 14  
FILE LAST UPDATED: 22 Mar 2007 (20070322/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate  
substance identification.

FILE MEDLINE

FILE LAST UPDATED: 20 Mar 2007 (20070320/UP). FILE COVERS 1950 TO DATE.

All regular MEDLINE updates from November 15 to December 16 have been  
added to MEDLINE, along with 2007 Medical Subject Headings (MeSH(R))  
and 2007 tree numbers.

The annual reload will be available in early 2007.

This file contains CAS Registry Numbers for easy and accurate  
substance identification.

FILE EMBASE

FILE COVERS 1974 TO 23 Mar 2007 (20070323/ED)

EMBASE is now updated daily. SDI frequency remains weekly (default)  
and biweekly.

This file contains CAS Registry Numbers for easy and accurate  
substance identification.

FILE BIOSIS

FILE COVERS 1969 TO DATE.

CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT  
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 21 March 2007 (20070321/ED)

FILE CAOLD

FILE COVERS 1907-1966

FILE LAST UPDATED: 01 May 1997 (19970501/UP)

This file contains CAS Registry Numbers for easy and accurate  
substance identification. Title keywords, authors, patent  
assignees, and patent information, e.g., patent numbers, are  
now searchable from 1907-1966. TIFF images of CA abstracts  
printed between 1907-1966 are available in the PAGE  
display formats.

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file supports REGISTRY for direct browsing and searching of  
all substance data from the REGISTRY file. Enter HELP FIRST for  
more information.

FILE DRUGU

FILE LAST UPDATED: 23 MAR 2007 <20070323/UP>

>>> DERWENT DRUG FILE (SUBSCRIBER) <<<

>>> FILE COVERS 1983 TO DATE <<<

>>> THESAURUS AVAILABLE IN /CT <<<



FILE BEILSTEIN  
FILE LAST UPDATED ON JANUARY 10, 2007

FILE COVERS 1771 TO 2006.

**FILE CONTAINS 9,780,003 SUBSTANCES**

>>>PLEASE NOTE: Reaction Data and substance data are stored in separate documents and can not be searched together in one query. Reaction data for BEILSTEIN compounds may be displayed immediately with the display codes PRE (preparations) and REA (reactions). A substance answer set retrieved after the search for a chemical name, a compounds with available reaction information by combining with PRE/FA, REA/FA or more generally with RX/FA. The BEILSTEIN Registry Number (BRN) is the link between a BEILSTEIN compound and belonging reactions. For more detailed reaction searches BRNs can be searched as reaction partner BRNs Reactant BRN (RX.RBRN) or Product BRN (RX.PBRN).<<<

>>> FOR SEARCHING PREPARATIONS SEE HELP PRE <<<

\*\*\*\*\*  
\* PLEASE NOTE THAT THERE ARE NO FORMATS FREE OF COST. \*  
\* SET NOTICE FEATURE: THE COST ESTIMATES CALCULATED FOR SET NOTICE \*  
\* ARE BASED ON THE HIGHEST PRICE CATEGORY. THEREFORE; THESE \*  
\* ESTIMATES MAY NOT REFLECT THE ACTUAL COSTS. \*  
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**NEW**

\* **PATENT NUMBERS (PN) AND BABS ACCESSION NUMBERS (BABSAN) CAN NOW BE SEARCHED, SELECTED AND TRANSFERRED.**  
\* **NEW DISPLAY FORMATS ALLREF, ALLP AND BABSAN SHOW ALL REFERENCES, ALL PATENT REFERENCES, OR ALL BABS ACCESSION NUMBERS FOR A COMPOUND AT A GLANCE.**

FILE WPIX  
FILE LAST UPDATED: 22 MAR 2007 <20070322/UP>  
MOST RECENT THOMSON SCIENTIFIC UPDATE: 200720 <200720/DW>  
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> New reloaded DWPI Learn File (LWPI) available as well <<<

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[http://www.stn-international.de/archive/stn\\_online\\_news/fraghitstr\\_ex.pdf](http://www.stn-international.de/archive/stn_online_news/fraghitstr_ex.pdf)

>>> IPC Reform backfile reclassification has been loaded to 31 December 2006. No update date (UP) has been created for the reclassified documents, but they can be identified by 20060101/UPIC and 20061231/UPIC. <<<

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PLEASE VISIT:  
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<http://scientific.thomson.com/support/patents/coverage/latestupdates/>

PLEASE BE AWARE OF THE NEW IPC REFORM IN 2006, SEE  
[http://www.stn-international.de/stndatabases/details/ipc\\_reform.html](http://www.stn-international.de/stndatabases/details/ipc_reform.html) and  
<http://scientific.thomson.com/media/scpdf/ipcrdwpi.pdf>

>>> FOR DETAILS ON THE NEW AND ENHANCED DERWENT WORLD PATENTS INDEX  
PLEASE SEE  
[http://www.stn-international.de/stndatabases/details/dwpi\\_r.html](http://www.stn-international.de/stndatabases/details/dwpi_r.html) <<<

FILE STNGUIDE  
FILE CONTAINS CURRENT INFORMATION.  
LAST RELOADED: Mar 16, 2007 (20070316/UP).

PRIORITY APPLN. INFO.:

US 2001-308617P

P 20010730

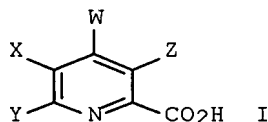
WO 2002-US24120

W 20020730

OTHER SOURCE(S):

MARPAT 138:153444

GI



AB 6-Aryl-4-aminopicolinic acids (shown as I; variables defined below; e.g. 4-amino-3-chloro-6-(4-methylphenyl)pyridine-2-carboxylic acid) and agriculturally acceptable derivs. of the carboxylic acid group are potent herbicides demonstrating a broad spectrum of weed control. Twelve herbicidal compns. are tabulated. Although the methods of preparation are not claimed, 47 example preps. are included and >200 specific I are mentioned along with phys. and/or herbicidal properties. Post-emergent herbicidal activities are included for some I against cocklebur (*Xanthium strumarium*), lambsquarter (*Chenopodium album*), barnyard grass (*Echinochloa crus-galli*) and yellow nutsedge (*Cyperus esculentus*); selectivity to wheat and corn is also shown. Pre-emergent herbicidal activities are included for some I against lambsquarter (*Chenopodium album*), pigweed (redroot) (*Amaranthus retroflexus*), crabgrass (large) (*Digitaria sanguinalis*), and giant foxtail (*Setaria faberii*). For I: X = H, halogen, C1-C6 alkyl, C1-C6 alkoxy, C1-C6 alkylthio, aryloxy, nitro, C1-C6 haloalkyl, C1-C6 haloalkoxy, thiocyanate, or cyano; Y = aryl, Ph, indanyl or naphthyl or heteroaryl (5- or 6-membered heteroarom. rings containing ≥1 heteroatoms which may be fused to other aromatic systems; aryl or heteroaryl group being unsubstituted or substituted with ≥1 substituents = halogen, hydroxy, nitro, cyano, aryloxy, formyl, C1-C6 alkyl, C2-C6 alkenyl, C2-C6 alkynyl, C1-C6 alkoxy, halogenated C1-C6 alkyl, halogenated C1-C6 alkoxy, C1-C6 acyl, C1-C6 alkylthio, C1-C6 alkylsulfinyl, C1-C6 alkylsulfonyl, aryl, C1-C6 OC(O)alkyl, C1-C6 NHC(O)alkyl, C(O)OH, C1-C6 C(O)Oalkyl, C(O)NH<sub>2</sub>, C1-C6 C(O)NHalkyl, C1-C6 C(O)N(alkyl)<sub>2</sub>, -OCH<sub>2</sub>CH<sub>2</sub>-, -OCH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-, -OCH<sub>2</sub>O- or -OCH<sub>2</sub>CH<sub>2</sub>O-). Z = halogen, C1-C6 alkyl, C1-C6 alkoxy, C1-C6 alkylthio, aryloxy, nitro, C1-C6 haloalkyl, C1-C6 haloalkoxy, thiocyanate, or cyano; and W = -NO<sub>2</sub>, -N<sub>3</sub>, -NR<sub>1</sub>R<sub>2</sub>, -N:CR<sub>3</sub>R<sub>4</sub> or -NHN:CR<sub>3</sub>R<sub>4</sub> (R<sub>1</sub> and R<sub>2</sub> = H, C1-C6 alkyl, C3-C6 alkenyl, C3-C6 alkynyl, aryl, heteroaryl, hydroxy, C1-C6 alkoxy, amino, C1-C6 acyl, C1-C6 carboalkoxy, C1-C6 alkylcarbonyl, C1-C6 alkylsulfonyl, C1-C6 trialkylsilyl or C1-C6 dialkyl phosphonyl or R<sub>1</sub> and R<sub>2</sub> taken together with N = 5- or 6-membered (un)saturated ring which may contain addnl. O, S or N heteroatoms; and R<sub>3</sub> and R<sub>4</sub> = H, C1-C6 alkyl, C3-C6 alkenyl, C3-C6 alkynyl, aryl or heteroaryl or R<sub>3</sub> and R<sub>4</sub> taken together with :C = a 5- or 6-membered saturated ring).

IT **496852-28-9P**, 4-Amino-3,5-dichloro-6-(2-furfuryl)pyridine-2-carboxylic acid

RL: AGR (Agricultural use); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of 6-aryl-4-aminopicolinic acids as herbicides with excellent crop selectivity)

RN 496852-28-9 HCAPLUS

CN 2-Pyridinecarboxylic acid, 4-amino-3,5-dichloro-6-(2-furanylmethyl)- (9CI)  
(CA INDEX NAME)